PCT

WORLD INTELLECTUAL PROPERTY ORGANIZATION International Bureau



INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

| (51) International Patent Classification 6: | | (11) International Publication Number: WO 99/66754 |
|--|---|--|
| H04Q 7/36 | A1 | (43) International Publication Date: 23 December 1999 (23.12.99) |
| (21) International Application Number: PCT/S (22) International Filing Date: 14 June 1999 (30) Priority Data: 09/097,473 15 June 1998 (15.06.98) 09/112,689 9 July 1998 (09.07.98) (71) Applicant: TELEFONAKTIEBOLAGET LM I (publ) [SE/SE]; S-126 25 Stockholm (SE). (72) Inventors: ÖSTBERG, Christer; Björkvägen 8, Staffanstorp (SE). JAENECKE, Fredrik; Svartb. 2, S-223 50 Lund (SE). WANG, Yi-Pin, Cedarpost, Cary, NC 27513 (US). (74) Agent: ERICSSON MOBILE COMMUNICATION Dept., S-221 83 Lund (SE). | ERICSSC S-245 odersgat Eric; 2 | BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG). Published With international search report. |
| (54) Title: METHOD, APPARATUS, AND SYSTEM FOR FAST BASE STATION SYNCHRONIZATION AND SECTOR IDENTIFICATION | | |
| 1ST PERCH CHANNEL (16ksps) PILOT SYMBOL UND PERCH | | SYMBOL FOR LONG CODE LOGICAL CHANNEL MASKED SYMBOL DLE |
| (16ksps) | | LONG CODE MASKED SYMBOL |

(57) Abstract

A method, apparatus, and system perform fast sector identification and base station synchronization. The base station transmits information in primary and secondary control channels to the remote station. The remote station performs synchronization using information in the primary and secondary control channels. A group of identification codes corresponding to the sector is determined using information in the secondary control channel. If this does not result in identification of the sector, an identification code corresponding to the sector is determined from information in the primary control channel. If this does not result in identification of the sector, the sector is identified based on information multiplied with symbols, e.g., pilot symbols, in the primary control channel, without having to decode the BCCH.